

t31\_ospace  
(TMaxczQorxFtJp6xF4mJDvH8AmEAqWJj85S)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k11\_ospace : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_ospace : \iota \Rightarrow \iota$  be given. Let  $k7\_ospace : \iota \Rightarrow \iota$  be given. Let  $k2\_ospace : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k6\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $v6\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v33\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_ospace : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow (k3\_finseq\_1 X0 = k1\_card\_1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow ((\neg v1\_xboole\_0 (k1\_card\_1 X0)) \wedge (v1\_card\_1 (k1\_card\_1 X0))) \quad (4)$$

Assume the following.

$$v1\_xboole\_0 \ k1\_xboole\_0 \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 \ X0) \Rightarrow ((v1\_xboole\_0 \ (k1\_card\_1 \ X0)) \wedge (v1\_card\_1 \ (k1\_card\_1 \ X0))) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1 \ X1 \ X0) \Rightarrow ((v1\_relat\_1 \ X1) \wedge (v1\_funct\_1 \ X1) \wedge (v1\_finseq\_1 \ X1)) \tag{7}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0 \ X0) \Rightarrow ((l2\_algstr\_0 \ X0) \wedge (l5\_algstr\_0 \ X0)) \tag{8}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0 \ X0) \Rightarrow ((l2\_struct\_0 \ X0) \wedge (l1\_algstr\_0 \ X0)) \tag{9}$$

Assume the following.

$$\forall X0.(l1\_struct\_0 \ X0) \Rightarrow (\forall X1.(l1\_vectsp\_1 \ X1 \ X0) \Rightarrow (l2\_algstr\_0 \ X1)) \tag{10}$$

Assume the following.

$$\forall X0.(l1\_algstr\_0 \ X0) \Rightarrow (l1\_struct\_0 \ X0) \tag{11}$$

Assume the following.

$$\forall X0.(\neg v2\_struct\_0 \ (k7\_bspace \ X0)) \wedge (l1\_vectsp\_1 \ (k7\_bspace \ X0) \ k2\_bspace) \tag{12}$$

Assume the following.

$$\forall X0.m2\_finseq\_1 \ (k6\_finseq\_1 \ X0) \ X0 \tag{13}$$

Assume the following.

$$\begin{aligned} &(\neg v2\_struct\_0 \ k2\_bspace) \wedge ((\neg v6\_struct\_0 \ k2\_bspace) \wedge ((v13\_algstr\_0 \\ &k2\_bspace) \wedge ((v33\_algstr\_0 \ k2\_bspace) \wedge ((v3\_group\_1 \ k2\_bspace) \wedge \\ &((v5\_group\_1 \ k2\_bspace) \wedge ((v4\_vectsp\_1 \ k2\_bspace) \wedge ((v5\_vectsp\_1 \\ &k2\_bspace) \wedge ((v2\_rlvect\_1 \ k2\_bspace) \wedge ((v3\_rlvect\_1 \ k2\_bspace) \wedge \\ &((v4\_rlvect\_1 \ k2\_bspace) \wedge (l6\_algstr\_0 \ k2\_bspace)))))))))) \end{aligned} \tag{14}$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 \ X0) \wedge ((m1\_finseq\_1 \\ &X1 \ (u1\_struct\_0 \ (k7\_bspace \ X0))) \wedge (m1\_subset\_1 \ X2 \ X0))) \Rightarrow (m2\_finseq\_1 \\ &(k11\_bspace \ X0 \ X1 \ X2) \ (u1\_struct\_0 \ k2\_bspace)) \end{aligned} \tag{15}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 (u1\_struct\_0 \\
& \quad (k7\_bspace X0))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 X0) \Rightarrow (\forall X3. \\
& \quad (m2\_finseq\_1 X3 (u1\_struct\_0 k2\_bspace)) \Rightarrow ((X3 = k11\_bspace X0 \\
& \quad X1 X2) \Leftrightarrow ((k3\_finseq\_1 X3 = k3\_finseq\_1 X1) \wedge (\forall X4.(v7\_ordinal1 \\
& \quad X4) \Rightarrow (((r1\_xxreal\_0 np\_1 X4) \wedge (r1\_xxreal\_0 X4 (k3\_finseq\_1 X1))) \Rightarrow \\
& \quad (k1\_funct\_1 X3 X4 = k3\_bspace (k1\_funct\_1 X1 X4) X2))))))))) \Rightarrow
\end{aligned} \tag{16}$$

Assume the following.

$$\forall X0.k6\_finseq\_1 X0 = k1\_xboole\_0 \tag{17}$$

Assume the following.

$$\forall X0.(l1\_struct\_0 X0) \Rightarrow (k1\_bspace X0 = k6\_finseq\_1 (k2\_struct\_0 X0)) \tag{18}$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (k11\_bspace X0 (k1\_bspace (k7\_bspace X0)) X1 = k1\_bspace k2\_bspace))$$